National Data Warehouse

NDW / NPIRS
Data Transmission Guide

Using Non-HL7 Structured File

Version 3.0

July 2005

Department of Health and
Human Services

Indian Health Service

Office of Information
Technology (OIT)

Contents

Version Control

Version	Date	Notes
1.0	January 2005	Initial version.
1.1	February 2005	Reformat, reorganize text; remove original appendixes C, D, change appendix E to C, F to D, include appendixes C, D in document; create tables of patient registration and encounter fields that are required to process and create reports.
2.0	May 2005	Reformat for NDW: Reorganize, rename sections; rewrite/update text; clarify fields required for processing and reporting with Note in Appendix A, B; updates to notes in Registration, Encounter export file format spreadsheets.
2.1	May 2005	Update Overview and Required Fields table.
2.2	June 2005	Clarified required fields in appendixes; re-formatted Encounter Export Required Export Required Fields and Registration Export Required Fields tables to clarify.
3.0	July 2005	Rename subtitle to "Using Non-HL7 Structured File"; use Documatron-generated registration and encounter field tables and create weblinks to PDF versions in corresponding document appendixes.

Overview

Although OIT/NPIRS has accepted data in many different formats in the past, requirements have been developed to help standardize data submission and processing procedures among the non-RPMS sites and the National Patient Information Reporting System (NPIRS) and its new, enhanced system design, the National Data Warehouse (NDW).

Health Level 7 (HL7), the industry-wide standard format for healthcare information, is the preferred method for data submission. HL7 was chosen as the preferred method of data submission because it is an industry standard for interoperability of clinical and patient information.

Besides the minimum elements required for basic reporting, such as Workload and User Population reports, the HL7 export format includes data elements that can be used to provide expanded reporting capabilities and analyses related to other health status needs and performance measurement activities, such as Diabetes Management, Epidemiology, GPRA, and JCAHO's ORYX.

An HL7 Guide that specifies the IHS requirements is available on the "How do we export our data?" web page of the IHS National Data Warehouse website:

   www.ndw.ihs.gov

For those non-RPMS IHS sites that are currently unable to implement the HL7 standard, this document provides information that will enable you to send your data in a format that we can understand and load into the NDW. This format will allow us to provide basic reporting, such as your Workload and User Population reports; however, it cannot provide the expanded reporting capabilities and analyses that are possible with HL7.

Contact Information

For any questions related to implementing the non-HL7 structured files, call or email the OIT Help Desk.

  Phone: 1-888-830-7280

  E-mail: npirshd@ihs.gov

Export File Requirements

OIT/NPIRS requires the following export files:

- Patient **registration** data

- Patient **encounter** (visit) data

Both export files use a fixed-length flat file format.

File Name Convention

The following file naming convention is used to identify non-HL7 structured files of registration and encounter data:

SF[R,E]*xxxxxxyyyyjjj*

where

SF	= File identification – Structured File
[R,E]	= R(egistration) or E(ncounter)
xxxxxx	= 6-character Area – Service Unit – Facility code (ASUFAC) for your site
yyyyjjj	= Date of transmission in year (*yyyy*) and Julian date (*jjj*) format

For example:

SFE1234562004005

This file name indicates a Structured File, containing Encounter data from ASUFAC 123456, transmitted on January 5, 2004.

To eliminate the possibility of a transmitted file being overwritten when more than one file is transmitted on a given date, we recommend appending a number, starting with _02, to any additional files transmitted on the same day.

For example:

SFE1234562004005	1st file transmission on January 5, 2004
SFE1234562004005_02	2nd file transmission on January 5, 2004
SFE1234562004005_03	3rd file transmission on January 5, 2004

Record Formats

The physical layouts of the registration and encounter export data files are described in:

- Appendix A - Structured File Format: Registration

- Appendix B -   Structured File Format: Encounter

Both appendixes contain tables that list the data fields, in sequence, including logical name, data type and length, description, and reference to standard code (lookup) tables.

The non-HL7 structured files of registration and encounter data use a fixed-length flat file format, where all fields are left-justified, space-filled character fields. For data samples, see Appendix D.

Required Fields

The following tables list the patient registration export and encounter export fields that are required to (1) load and process the data, and (2) create workload and user population reports.

Registration Export Required Fields

Patient Registration Logical Field Name
Unique Registration ID
Registration Record Create Date
Date of Last Update
Chart Facility Code
Chart Number
First Name
Middle Name
Last Name
Date of Birth
Gender
Social Security Number
Beneficiary Classification Code
Tribe Code
Blood Quantum Code
Community of Residence Code

For the complete list of patient registration data export fields, see Appendix A - Structured File Format: Registration.

Encounter Export Required Fields

Encounter/Visit Logical Field Name	Notes
Unique Encounter ID	
Chart Facility Code	
Chart Number	
Date of Birth	
Gender	
Social Security Number	
Tribe Code	
Community of Residence Code	
Beneficiary Classification Code	
Service/Admission Date	
Location of Encounter	
Service Type Code	
Service Category Code	
Clinic Code	
Provider Affiliation Code (1)	Primary
Provider Discipline Code (1)	Primary
Unique Registration ID	
Date of Last Update	
Diagnosis Code (1)	Primary
Cause of Diagnosis (1)	Primary
Cause of Injury (1)	Required if injury
Place of Injury (1)	Required if injury
Diagnosis Code (2 -9)	Required if additional ICD9 diagnosis codes are present
Admission Service	Required for inpatient
Number of Consults	Required for inpatient
Discharge Date	Required for inpatient
Discharge Type Code	Required for inpatient
Length of Stay	Required for inpatient
Prescription Quantity	
Dental Delivery Mode Code	Required for dental encounter
ADA Code (1)	Required for dental encounter
ADA Units (1)	Required for dental encounter
ADA Code (2 – 12)	Required if additional ADA codes are present
ADA Units (2 – 12)	Required if additional ADA units are present
CHS Cost	Required for Contract Health Services
Vendor Type Code	Required for Contract Health Services
Authorizing Facility	Required for Contract Health Services
Purchase Order Number	Required for Contract Health Services

For the complete list of encounter data export fields, see Appendix B - Structured File Format: Encounter.

Valid Values

There are four categories of valid data field values:

(1) Literal values, such as last name.

(2) IHS Standard Code Book values

(3) IHS-specific code set values not included in the online IHS Standard Code Book

(4) National Standard Code sets, such as ADA and CPT

Accessing Standard Codes

Standard codes are uniform listings of descriptive terms and identifying codes. These codes can be IHS-specific or national standard code sets (e.g., ICD9, ADA), that are generally accepted in the medical information community.

Accessing IHS Standard Code Sets

The Standard Code Book (SCB) tables contain approved code sets from the Indian Health Service (IHS) Standard Code Book. For access to the online IHS SCB tables, go to

http://www.ihs.gov/CIO/scb/

Standard code sets (SCS) approved by the Division of Information Resources (DIR) that are used are also listed at this website under DIR SCS tables.

Additionally, the NDW uses other IHS-specific code sets, which are listed in Appendix C - Other IHS-Specific Code Sets.

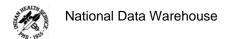## Accessing National Standard Code Sets

The NDW uses the following national standard codes sets.

- **ICD9 – International Classification of Diseases**

  These codes are used to classify and categorize diagnoses and procedures. Many online sources of information exist, including

  http://www.cms.hhs.gov/paymentsystems/icd9

  http://www.cdc.gov/nchs/about/major/dvs/icd9des.htm

- **HCPCS/CPT**

  Healthcare Common Procedure Coding System (HCPCS) is a medical code set created in 1983 by the Center for Medicare and Medicaid Services (CMS), and is used to identify health care procedures, equipment, and supplies. It was primarily designed for claims submission. There are three levels:

  Level I   contains AMA-maintained Common Procedure Terminology (CPT) codes.

  Level II   contains items and services not included in the CPT medical code set, and is maintained by the Centers for Medicaid and Medicare Services (CMS), Blue Cross Blue Shield Association (BCBSA), and Health Insurance Association of America (HIAA).

  Level III   contains codes assigned by Medicaid agencies for additional items not included in Level I or Level II.

NOTE   Level III Local codes have been eliminated as of 12-31-2003, replaced by S or C code sections of HCPCS Level II.

  Your facility may already be set up to update HCPCS and CPT codes. If needed, the following sites can be used as a starting point or a source of clarification on these code sets:

  For HCPCS, see http://cms.hhs.gov/medicare/hcpcs/.

  For CPT, see http://www.ama-assn.org/ama/pub/category/3113.html.

- **ADA/CDT**

  The American Dental Association (ADA) is the source for ADA diagnosis/procedure codes, also know as CDT codes. HIPAA requires use of the current version of CDT-4 for electronic transmission dental information. For more information go to

  http://www.ada.org

- **CVX – Vaccines Administered**

  The National Immunization Program (NIP) of the Centers for Disease Control and Prevention (CDC) maintains the code set of vaccines administered (CVX). For more information, go to

  http://www.cdc.gov/nip/registry/hl7/hl7-cvx.htm

Testing and Transmitting Export Files

Before data can be accepted into NPIRS/NDW, it must be tested for validity and adherence to the file structure. Before production processing of your data exports can begin, you must send to us an initial "test" version of the Patient Registration and Encounter data export files.

When we receive your test Patient Registration data export file, we will process the file, note any problems, and work with you to resolve those problems. We will repeat the testing procedure with your test Encounter data export file. When all processing issues for both export files are resolved and testing results are satisfactory, production processing of your data exports can begin.

OIT/NPIRS will work with you to determine the best way to transmit your files, including where and how to send them.

Appendix A - Structured File Format: Registration

The non-HL7 structured file uses a fixed-length flat file format, where all fields are left-justified, space-filled character fields.

This appendix refers to an NDW database-generated report. This report specifies the physical layout of the registration data, where patient registration data fields are listed in sequential order by

- Logical name, where those names shown in **bold** are the data fields required to (1) load and process your data, and (2) produce your workload and user population reports

- Data type and field length

- Description, including specific formatting

- Reference to standard code (lookup) tables, as appropriate

To download the most recent version of the **Structured File Format: Registration** report:

1. CLICK HERE   *OR*   **a.** Go to the IHS National Data Warehouse website:

www.ndw.ihs.gov

          b. In the left panel, click the question "**How do we export our data?**"

          c. In the right panel, locate and click the link, **IHS's NDW/NPIRS Data Transmission Guide Using Non-HL7 Structured File**.

2. Click the link, **Structured File: Registration – Appendix A**.

Appendix B - Structured File Format: Encounter

The non-HL7 structured file uses a fixed-length flat file format, where all fields are left-justified, space-filled character fields.

This appendix refers to an NDW database-generated report. This report specifies the physical layout of the encounter data, where patient encounter data fields are listed in sequential order by

- Logical name, where those names shown in **bold** are the data fields required to (1) load and process your data, and (2) produce your workload and user population reports

- Data type and field length

- Description, including specific formatting

- Reference to standard code (lookup) tables, as appropriate

To download the most recent version of the **Structured File Format: Encounter** report:

1. [CLICK HERE](#)   *OR*   **a.** Go to the IHS National Data Warehouse website:

www.ndw.ihs.gov

b. In the left panel, click the question "**How do we export our data?**"

c. In the right panel, locate and click the link, **IHS's NDW/NPIRS Data Transmission Guide Using Non-HL7 Structured File**.

2. Click the link, **Structured File: Encounter – Appendix B**.

Appendix C - Other IHS-Specific Code Sets

Other IHS-specific code sets whose values the NDW uses are listed in the following tables.

Service Category Codes

These codes describe the category of service provided to the patient during the encounter.

Code	Service Category Description
A	AMBULATORY
C	CHART REVIEW
D	DAILY HOSPITALIZATION DATA
E	EVENT (HISTORICAL)
H	HOSPITALIZATION
I	IN HOSPITAL
N	NOT FOUND
O	OBSERVATION
R	NURSING HOME
S	DAY SURGERY
T	TELECOMMUNICATIONS
X	ANCILLARY PACKAGE DAILY DATA

As of 4/15/2004

Service Type Codes

These codes describe the type of service for the encounter.

Code	Service Type Description
6	TRIBE-638 PROGRAM
C	CONTRACT
I	IHS
O	OTHER
P	TRIBE-COMPACTED TRIBAL PROGRAM
S	STATE
T	TRIBE-NON 638/NON-COMPACT
U	URBAN CLINIC
V	VA

As of 4/15/2004

Appendix D - File Samples

All fields, even numerics, are treated as left-justified, space-filled character fields. For easier readability of these examples, bold dots (**.**) represent empty fields or unused bytes within fields

Registration Data Example

```
123450000000003200012012004 0220I661810123456DR........ABLE..........
................BAKER.........................CHARLIE...............
........JR........1935011620040220187.8.M123456789.01024204120951975
02011234.S..MAIN.......................................PHOENIX.......
................AZ123451234ABLE........................BAKER......
..................CHARLIE......................LIDA..............
..........ROSE.........................DELTA......................
...CYMCRA...........................20000201200402201 23456789A....
..............................................................
...........................................ABLE....................
....BAKER.....................CHARLIE.......................SELF
............MCRB...........................200002012004 0220123456
789A...........................................................
...........................................ABLE..............
...........BAKER.................CHARLIE...................
....SELF............PVTPRIVATE.INSURANCE.............19750201200402
20996375.........................DELTA.DENTAL.....................
................001020003..............................ABLE......
.................BAKER.........................CHARLIE..........
...........SELF................................................
..............................................................
..............................................................
..............................................................
..............................................................
..............................................................
..............................................................
..............................................................
..............................................................
..............................................................
```

Encounter Data Example

```
1234564444455557404101123456199504 12F2345678900224041537012004 0415404
101IA.06100603.........345678901234567N2004042020040420801...2E881.0
B.............................................................
..............................................................
..............................................................
...............044......2..20040422..13.............1...............
........N........150110NY.210......N98.............N...............N
.............N..............N.............N.............N1.22
..............................................................
..............................................................
..............................................................
..............................................................
..............................................................
..........................................................I........
...............................90655...........................
..............................................................
.......................
```